



Attorney Docket No.: 8E07.1-050
Application Serial No.: 10/623,382
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	EMS Technologies, Inc.)	
)	
Serial No.:	10/623,382)	
)	Group Art Unit: 1116
File Date:	July 18, 2003)	
)	Examiner: Unknown
Inventor(s):	CARSON, James)	
)	
For:	DOUBLE-SIDED, EDGE-MOUNTED)	
	STRIPLINE SIGNAL PROCESSING)	
	MODULES AND MODULAR NETWORK)	

INFORMATION DISCLOSURE STATEMENT

Mail Stop: IDS
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

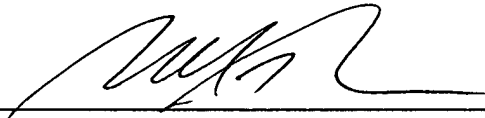
October 29, 2003

Sir:

In accordance with 37 C.F.R. § 1.56, Applicant submits herewith form PTO-1449 disclosing all known documents material to patentability for the application identified above. Applicant respectfully requests consideration of the cited documents and making the same of record in the prosecution of this U.S. application. Copies of these documents are enclosed.

No fee is believed to be due, as this Information Disclosure Statement is submitted before receipt of this application's first Official Action on the merits. 37 C.F.R. § 1.97(b)(3). However, if the United States Patent and Trademark Office finds that a fee is due, please charge to deposit account no.: 50-2591

Respectfully submitted,



Michael J. Mehrman
Registration No.: 40,086

MEHRMAN LAW OFFICE, P.C.
One Premier Plaza
5605 Glenridge Drive
Suite 795 B, Box 8
Atlanta, Georgia 30342
Tel: (404) 497-7400
Fax: (404) 419-7405

Certificate of Mailing

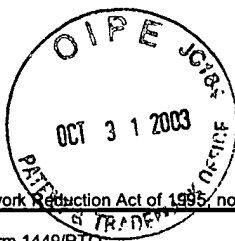
I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail to: Mail Stop IDS, Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the date indicated below:

Mailing Date: October 29, 2003

Signature: _____

Teri L. Bonica

Mailing Date: October 29, 2003



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/623,382
Filing Date	July 18, 2003
First Named Inventor	CARSON, James
Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	8E07.1-050

Sheet 1 of 4

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA	US- 5,280,292	01-18-1994	Matra Marconi Space	
	AB	US- 4,633,259	12-30-1986	Westinghouse Elect.	
	AC	US- 4,503,434	03-05-1985	Ford Aerospace	
	AD	US- 6,081,233	06-27-2000	Telefonaktiebolaget	
	AE	US- 6,252,560 B1	06-26-2001	Denso Corporation	
	AF	US- 4,638,317	01-20-1987	Westinghouse Elect.	
	AG	US- 5,691,728	11-25-1997	TRW Inc.	
	AH	US- 5,777,579	07-07-1998	TRW Inc.	
	AI	US- 6,225,947	05-01-2001	Telefonaktiebolaget	
	AJ	US- 5,373,299	12-13-1994	TRW Inc.	
	AK	US- 4,231,040	10-28-1980	Motorola, Inc.	
	AL	US- 4,810,982	03-07-1989	Hughes Aircraft Comp	
	AM	US- 5,455,742	10-03-1995	Eaton Corporation	
	AN	US- 6,563,395 B2	05-13-2003	Matsushita Electric	
	AO	US- 6,295,035 B1	09-25-2001	Raytheon Company	
	AP	US- 6,480,524 B1	11-12-2002	Nortel Networks Lim	
	AQ	US- 2002/0080066 A1	06-27-2002	Dent	
	AR	US- 2002/0190891 A1	12-19-2002	Viana	
	AS	US- 2003/0011519 A1	01-16-2003	Breglia	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				

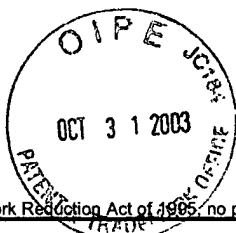
Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/08A (08-03)



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/623,382
Filing Date	July 18, 2003
First Named Inventor	CARSON, James
Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	8E07.1-050

Sheet 3 of 4

NON PATENT LITERATURE DOCUMENTS

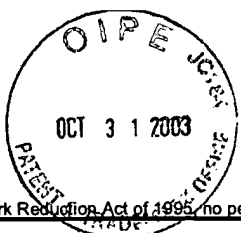
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	ACCATINO, 12319 - MultiKaRa Deliverable D4 (update) Butler Matrices: Design & Breadboard, Information Society Technologies, 03-22-2001	
	CB	CAILLOCE, 12319 - MULTIKARA Deliverable D6 Demonstrator specifications, Information Society Technologies, 06-08-2001	
	CC	HAYASHI, Four-Element Planar Butler Matrix Using Half-Wavelength Open Stubs, IEEE M&WCL, March 2002, Vol. 12, No. 3, pgs 73-75	
	CD	BONA, Low-Loss Compact Butler Matrix for a Microstrip Antenna, IEEE Transactions on MT&Tech, Sept. 2002, Vol 50, No. 9, pgs 2069-2075	
	CE	DENIDNI, Microstrip 8X8 Butler Matrix for the Beamforming Network At 1.9 GHz Band, ISBN 84778.53495 ISRAMT'99, pgs 747-750	
	CF	ACCATINO, Cad of Waveguide Butler Matrices Including Mechanical and Thermal Constraints, Abstract, 4 pages	
	CG	SHELTON, Reflective Butler Matrices, IEEE Transactions on Antennas and Propagation, Sept. 1979, Vol. AP-27, No. 5, pgs 651-659	
	CH	ANG, A Wide-Band Monopulse Comparator With Complete Nulling in All Delta Channels Throughout Sum Channel Bandwidth, IEEE Trans on MT&T, Feb. 2003, Vol. 51, No. 2, pgs 371-373	
	CI	BARKER, An Octave Bandwidth Monopulse Processor, IEEE, 0-7803-4603-6/97, 3 pages,	
	CJ	RICARDI, A Diplexer Using Hybrid Junctions, IEEE Transactions on Microwave Theory and Techniques, Aug. 1966, Vol. MTT-14, No. 8, pgs 364-371	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Applicati n Number	10/623,382
Filing Date	July 18, 2003
First Named Inventor	CARSON, James
Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	8E07.1-050

Sheet 4 of 4

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CK	SEKI, 30-GHz Multibeam Antenna Using Bi-Layer Butler Matrix Circuits, IEICE Trans. Commun., Dec. 1996, Vol. E79-B, No. 12, pgs 1778-1783	
	CL	ISOTA, A Simple Design Method of the Planar Butler Matrix Using Thin Dielectric Substrate Metalized Both Side, IEICE Trans. Electron, Feb. 2003, Vol. E86-C, No. 2, pgs 162-167	
	CM	HAYASHI, Radial Open Stub and Its Application to a Simple Design of a Four-element Planar Butler Matrix, IEICE Trans. Elec., May 2002, Vol E85-C, No. 5, pgs 1164-1169	
	CN	UEHARA, A Planar Sector Antenna for Indoor High-Speed Wireless Communication Systems, IEICE Trans. Commun., Dec. 1996, Vol. E79-B, No. 12, pgs 1773 - 1777	
	CO	ANGELUCCI, Multiport Power Amplifiers for Mobile-Radio Systems Using Microstrip Butler Matrices, IEEE, 1994, 0-7803-2009-3/94, pgs 628-631	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.